PCB CLEANUP PLAN
Former Rail Spur Property
Bay Road and Charter Street
Redwood City, California

May 2014

Prepared for

899 Broadway Associates
900 Veterans Boulevard, Suite 410
Redwood City, California 94063

Prepared by

WEST
Environmental Services & Technology
711 Grand Avenue, Suite 220
San Rafael, California 94901
415/460-6770 Fax 415/460-6771
main@westenvironmental.com

TABLE OF CONTENTS

SECTION **PAGE**

TABLE OF CONTENTS

SECTION **PAGE**

LIST OF TABLES

LIST OF FIGURES

SIGNATURE PAGE

All information, conclusions and recommendations contained in this report have been prepared under the supervision of the undersigned professional(s).

Peter M. Krasnoff
California Registered Civil Engineer (44031)

REGISTERED PROFESSIONAL ENGINEER
PETER KRASNOFF
C44031
EXP. 6/30/15
CIVIL
STATE OF CALIFORNIA

5/20/14
Date

Peter E. Morris
California Professional Geologist (7084)

PROFESSIONAL GEOLOGIST
PETER E. MORRIS
7084
Exp. 4/30/15
STATE OF CALIFORNIA

5/20/14
Date

1.0 INTRODUCTION

This *PCB Cleanup Plan* ("*Cleanup Plan*") has been prepared by West Environmental Services & Technology, Inc., (WEST) for the former railroad spur property (RSP) located northeast of the intersection of Bay Road and Woodside Road in Redwood City, California ("the Site;" Figure 1). This *Cleanup Plan* presents the scope-of-work to address soil containing polychlorinated biphenyls (PCBs). This *Cleanup Plan* was prepared pursuant to 40 Code of Federal Regulations (CFR) Section 761.61(c) and in accordance with the United States Environmental Protection Agency (USEPA) May 31, 2013 directive.

1.1 BACKGROUND

Union Pacific Railroad operated a rail spur adjacent to 2201 Bay Road in Redwood City, California. Historical operations conducted at 2201 Bay Road included electrical transformer manufacturing and aboveground storage of PCB-laden dielectric fluids. The PCB-laden dielectric fluids were delivered to 2201 Bay Road by railcar and transferred via an underground pipeline to aboveground storage tanks. Since 1999, investigations conducted at 2201 Bay Road revealed PCBs in surface soil. Further details regarding the investigations conducted at 2201 Bay Road were provided in AMEC Geomatrix's February 2011 *Sampling and Analysis Plan, Tyco Thermal Controls, LLC, 2201 Bay Road, Redwood City, California* (AMEC, 2011). In 2012, soil was excavated from 2201 Bay Road adjacent to the southern edge of the Site up to 8-feet below ground surface.

Previous activities conducted on the Site have included implementation of interim measures to stabilize surface soil, including application of polymer dust suppressant, fencing and installation of windscreens. In 2010, soil samples collected from the Site revealed PCBs up to 3,520 milligrams per kilogram (mg/kg) in samples collected between 0.3-feet and 1-foot below ground surface.

In May 2013, Site observations indicated that pipe from an adjacent business was stored on the Site and that equipment used to move the pipe had disturbed surface soil. In June 2013, the Site was re-stabilized with a polymer dust suppressant and samples were collected from the adjacent properties to characterize whether PCB-contained dust was present. In addition, the USEPA and the California Regional Water Quality Control Board – San Francisco Bay Region (Regional Board) required preparation of a cleanup plan to address the PCB soil on the Site.

In June 2013, wipe and bulk samples were collected to characterize whether airborne dust containing PCBs may have been deposited on the adjacent properties or on materials previously stored on the Site. Laboratory analysis of the wipe samples did not reveal PCBs above the laboratory-reporting limit of 1 microgram per wipe over a 100 square centimeter area (µg/wipe). In addition, bulk samples collected from the materials previously stored on the Site did not reveal PCBs above the laboratory-reporting limits of 0.100 mg/kg to 0.160 mg/kg. One surface sample collected from a sand fill material on the adjacent R&B Company property contained PCBs at 0.579 mg/kg, which is below the United States Environmental Protection Agency's (USEPA) Regional Screening Level (RSL) of 0.74 mg/kg.

Based on the previous soil sampling and in accordance with the USEPA directive and 40 CFR 761, a cleanup plan to address PCBs in Site soil has been developed that includes excavation, capping and institutional controls.

2.0 SITE DESCRIPTION

The 0.2-acre unpaved Site is a narrow strip of land ranging between approximately 20-feet to 45-feet wide and approximately 360-feet long located northeast of the intersection of Bay Road and Woodside Road and is located adjacent to 2201 Bay Road in Redwood, California (Figure 2-1). The Site is currently secured by chain link fencing. The former railroad tracks have been removed. The land use near the Site is mixed commercial and industrial. Details regarding the Site and surrounding area were provided in AMEC Geomatrix's February 2011 *Sampling and Analysis Plan, Tyco Thermal Controls, LLC, 2201 Bay Road, Redwood City, California* (AMEC, 2011).

3.0 SUMMARY OF INVESTIGATIONS

Investigations and interim actions have been conducted on-Site. PCBs were detected in soil up to 3,520 mg/kg in the samples collected between the ground surface and approximately 1-feet below ground surface. Investigations and remedial actions have also been conducted on the adjacent property located 2201 Bay Road since 1999. Details of the previous investigations conducted at 2201 Bay Road are provided in AMEC Geomatrix's February 2011 *Sampling and Analysis Plan, Tyco Thermal Controls, LLC, 2201 Bay Road, Redwood City, California* (AMEC, 2011). Remedial actions were implemented on the adjacent 2201 Bay Road property in 2012, which included soil removal to approximately 8-feet below ground surface (AMEC. 2011). Details of the Site investigations and interim actions are provided below.

3.1 SOIL SAMPLING-2010

In 2010, 40 discrete soil samples were collected from 20 borings (W-1 to W-20) at 0.3-feet and 1-foot below ground surface (Figure 2-1). The 40 discrete soil samples were composited into 20 two-way composite samples (W-1,-2 to W-19,-20) by the analytical laboratory and analyzed for PCBs using USEPA Method 8082. Laboratory analysis of the samples collected from 0.3-feet below ground surface revealed total PCBs (sum of Aroclor 1254 and Aroclor 1260) up to 3,520 mg/kg (W-1,-2). Laboratory analysis of the samples collected from one-foot below ground surface revealed total PCBs up to 2,782 mg/kg (W-1,-2) (Table 3-1). Lower concentrations of PCBs in soil, less than 6.5 mg/kg were detected in the remaining samples W-3,-4 to W-19,-20.

3.2 DUST SUPPRESSANT APPLICATION-2013

On June 21, 2013, pursuant to the May 31, 2013 USEPA directive, a dust suppressant polymer was applied to the Site to stabilize the surface soil. The dust suppressant polymer was applied by spraying a polymer-water mixture onto the Site using a water truck. The water truck traversed along the northern edge of the Site from the adjacent 1155 Broadway property and applied two to three coatings of the mixture onto the Site soil.

3.3 WIPE AND BULK SAMPLING - 2013

In 2013, wipe and bulk samples were collected from the adjacent properties to characterize the potential presence of dust containing PCBs (Figure 3-2). Wipe samples were collected from: a window pane on 1155 Broadway (WP-3); a parking lot sign within the Smart & Final retail store parking lot (WP-4); and from the R&B Company property including metal shelving (WP-1 and WP-2) and piping (WP-8 and WP-9) previously stored on the Site, forklifts that entered the Site (WP-5 and WP-6) and the forklift wash area (WP-7). Bulk samples were also collected from materials previously stored on the Site including: a wooden shipping frame (BK-3); a metal shipping frame (BK-4); and wooden pallets (BK-5). A bulk soil sample was also collected from a sand fill material on the R&B Company property located adjacent to the access gate for the Site. Details of the sample collection and laboratory analytical results are present below.

3.3.1 Wipe Sample Collection Methodology and Analytical Results

The wipe samples were collected using a laboratory-prepared glass jar containing a gauze pad treated with isopropyl alcohol. Sample collection consisted of removing the gauze pad from the glass jar then wiping with a gloved hand within a 10cm by 10cm area designated by a disposable template. The wipe samples were first collected by wiping in columns top to bottom within the 10cm by 10cm template by moving left to right across the template. The gauze pad was then wiped in rows left to right within the 10cm by 10cm template by moving top to bottom. Following sample collection, the gauze pad was then placed back into the glass jar, labeled and placed in a chilled cooler for transportation to K Prime, Inc. a California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory following ASTM D 4840 chain-of-custody protocols. The wipe samples were analyzed for PCBs by USEPA Method 8082A/3550C.

Laboratory analysis of the wipe samples did not reveal PCBs above the laboratory-reporting limits of 1 microgram per wipe (µg/wipe). A summary of the wipe sample analytical results is included in Table 3-2.

3.3.2 Bulk Sample Collection Methodology and Analytical Results

The bulk samples BK-3 to BK-5 were collected by removing an approximately 10cm by 10cm section of the wooden and metal materials using hand tools. The wooden and metal samples were then placed in a plastic baggie, labeled and placed within a chilled cooler for transportation to K Prime, Inc., a CDPH ELAP certified laboratory following ASTM D 4840. Bulk sample BK-2 was collected from the upper 2cm of the sand fill material by using a disposable plastic trowel. The sand fill material was then placed into a laboratory-supplied glass jar, labeled and placed in a chilled cooler for transportation to K Prime, Inc., a CDPH ELAP certified laboratory following ASTM D 4840. The bulk samples were analyzed for PCBs using USEPA 8082A/3550C. Laboratory analysis of the bulk samples BK-3 to BK-5 did not reveal PCBs above the laboratory-reporting limits between 0.100 mg/kg and 0.160 mg/kg. Laboratory analysis of the bulk sample BK-2 revealed PCBs as Aroclor 1260 at 0.579 mg/kg. A summary of the bulk sample analytical results is included in Table 3-2.

4.0 DATA EVALUATION

Investigations have revealed the presence of PCBs in soil at the Site. An assessment of the potential risks to human health and the environment associated with the presence of PCBs in the soil requires an accurate CSM. A CSM was prepared which incorporates all of the Site data and describes the fate and distribution of chemicals in the subsurface. Through a comparison with the data, the CSM was used to assess the adequacy of the Site characterization and identify whether more information is required to make decisions regarding appropriate response actions, i.e., data gaps.

4.1 CONCEPTUAL SITE MODEL

Evaluation of the data have revealed that the distribution of PCBs in soil at the Site is attributable to accidental releases, spills and leaks of PCB-laden dielectric fluid during transfer from the rail cars at 2201 Bay Road as presented in AMEC Geomatrix's February 2011 *Sampling and Analysis Plan, Tyco Thermal Controls, LLC, 2201 Bay Road, Redwood City, California* (AMEC, 2011). A review of historic operations, chemical distribution in soil and the chemical fate and transport was performed in the development of the CSM. The CSM for the Site incorporates known historical operations, geology and hydrogeology, properties of the chemicals at the Site, potential preferential pathways and potential exposure scenarios. Investigations have revealed PCBs. As part of the development of the CSM, a review was conducted of potential preferential pathways, potential sensitive receptors and geologic conditions that could have influenced the migration of contaminants. The Site is currently vacant, undeveloped, fenced and located within a commercial/industrial area.

4.2 SCREENING LEVEL ASSESSMENT

Using the CSM, a screening level assessment has been performed that includes a comparison of chemical data at the Site to potentially applicable human health and environmental protection criteria. The screening level assessment was performed to assist in assessing the adequacy of the

existing data. The screening level assessment consisted of three components: (1) identification of potential exposure pathways; (2) estimation of exposure concentrations; (3) identification of appropriate screening levels for each media; and (4) a comparative analysis. The screening level assessment has been used to evaluate conditions of potential concern and identify areas for additional investigations, i.e., data gaps.

4.2.1 Exposure Pathway Evaluation

Exposure pathways for PCBs in soil at the Site have been evaluated to assess the potential impacts to human health and the environment. Potential human exposure to PCBs is limited to direct contact with soil within the upper two-feet by future Site workers (USEPA, 2002).

4.2.2 Estimated Exposure Concentration

The maximum concentration detected in soil was used as the reasonable maximum exposure (RME) concentration. The California Environmental Protection Agency (CalEPA) recommends that maximum beneficial uses of a property be the basis for evaluation. The current and future use of the Site is commercial/industrial. Therefore, conditions in soil at the Site have been screened using the methods described below based on a commercial/industrial exposure scenario.

4.2.2.1 EXPOSURE CONCENTRATIONS

The maximum-detected concentrations of the PCBs were used to estimate the reasonable maximum exposure (RME) point concentration for comparison with the identified screening levels pursuant to USEPA guidance (USEPA, 1992).

4.2.3 Identification of Screening Levels

Based on the identified exposure pathways, screening levels were identified for chemicals in soil. The screening levels are not necessarily cleanup goals, but have been selected to evaluate Site conditions and identify the necessity for additional actions, e.g., supplemental investigations or

interim actions. The screening levels are conservatively calculated threshold values below which particular chemicals are believed to "be below thresholds of concern for risks to human health." The presence of a chemical at concentrations in excess of a screening level does not indicate that adverse impacts to human health are occurring or will occur but suggests that further evaluation of potential human health concerns is warranted. The results of the investigation have been compared with screening levels presented in the USEPA Regional Screening Levels (RSLs) (USEPA, 2012).

4.2.3.1 USEPA REGIONAL SCREENING LEVELS

The USEPA has developed RSLs. RSLs combine current USEPA toxicity values with standard exposure factors to estimate concentrations "in environmental media (soil, air, and water) that are protective of humans, including sensitive groups, over a lifetime" (USEPA, 2012). As outlined by the USEPA, RSLs "are chemical-specific concentrations for individual contaminants in air, drinking water and soil that may warrant further investigation or site cleanup."

When considering RSLs as preliminary remediation goals (PRGs), USEPA recommends that maximum beneficial uses of a property be the basis for evaluation. The anticipated future use of the Site includes commercial/industrial. Therefore, the data will be evaluated with respect to commercial/industrial RSLs. The commercial /industrial RSL for PCBs including Aroclor 1254 and Aroclor 1260 is 0.74 mg/kg.

4.2.3.2 40 CFR 761

Pursuant to 40 CFR 761.61(a)(4)(ii), for non-porous surfaces, the PCB cleanup standard is less than or equal to 10 µg/100 cm^2 area.

4.3 COMPARATIVE ANALYSIS

Laboratory analytical results for the soil, wipe and bulk samples have been compared to the identified evaluation criteria to assist in identifying conditions of concern.

4.3.1 Soil Conditions

PCBs have been detected in soil up to 3,520 mg/kg above the USEPA RSL of 0.74 mg/kg.

4.3.2 Wipe Samples

Laboratory analysis of the wipe samples did not reveal PCBs above the laboratory-reporting limit of 1 µg/wipe over a 100 cm^2 area, which is below the 40 CFR 761.61 PCB cleanup standard for non-porous surfaces of 10 µg/100 cm^2.

4.3.3 Bulk Samples

Laboratory analysis of the bulk samples revealed PCBs up to 0.579 mg/kg (BK-2), which is below the 40 CFR 761.61 high occupancy PCB cleanup standard for bulk PCB remediation waste of 1 mg/kg and below the USEPA RSL of 0.74 mg/kg.

4.4 SUMMARY

Based on the wipe and bulk sample analytical results and the re-stabilization of the Site, additional actions are not necessary to address potential airborne dust-containing PCBs on adjacent properties. However, based on the comparative analysis, soil capping with institutional controls is necessary to address the potential exposure to future Site workers to PCBs in soil.

4.5 DATA GAP ANALYSIS

The CSM generally describes the conditions at the Site and that the potential exposure to PCBs in soil is limited to the upper two-feet. Based on the identified exposure pathway, a cleanup plan has been developed which includes soil excavation, capping and institutional controls.

5.0 CLEANUP PLAN IMPLEMENTATION

Based on the data evaluation, a cleanup plan has been developed to address the presence of PCBs in soil in accordance with 40CFR761(c). The cleanup plan includes excavation, capping the Site in areas where PCBs are greater than 0.74 mg/kg and use of institutional controls to control exposures. The cap will be constructed as a physical barrier to mitigate potential exposure to future Site workers. The institutional controls include adopting land use covenants (LUCs) limiting Site use and disturbance of the cap and security fencing.

The following tasks were developed to achieve the goals of the cleanup plan.

Task 1.0: Notifications

Task 2.0: Pre-Excavation Sampling

Task 3.0: Soil Excavation

Task 4.0: Post-Excavation Sampling

Task 5.0: Cap and Cover

Task 6.0: Equipment Decontamination

Task 7.0: Land Use Covenants

Task 8.0: Cap Monitoring

Task 9.0: Contingency Plan

Task 10.0: Completion Report.

5.1 TASK 1.0: NOTIFICATIONS

Pursuant to 40 CFR 761.61, submittal of the *Cleanup Plan* will constitute notification to the USEPA of the proposed cleanup.

5.2 TASK 2.0: PRE-EXCAVATION SAMPLING

Soil samples will be collected from the Site to delineate the western extent of the proposed cap area. A summary of the soil sampling collection methodology is presented below.

5.2.1 Sampling Grid

Prior to sample collection, an alpha-numeric sampling grid will be laid out on a portion of the Site (Figure 5-1). The grid will be comprised of 10-foot by 10-foot grid cells. Soil samples will then be collected from the center of the grid cell for laboratory analysis.

5.2.2 Sample Collection

Borings will be advanced using limited access direct-push drilling equipment operated by a California licensed C-57 well drilling contractor. Soil core samples will be collected continuously using a 2-inch diameter stainless steel core barrel outfitted with an acetate liner. The core barrel will be advanced to approximately 2-feet below ground surface. Soil samples for laboratory analysis will be cut from the acetate liner at 1-foot and 2-foot depth intervals below the existing ground surface. The acetate liner segments will then be capped with Teflon sheets and plastic end caps, labeled and placed in a cooler for transportation to a California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory following ASTM D 4840 chain-of-custody protocols. The soil samples will then be analyzed using United States Environmental Protection Agency (USEPA) Method 8082/3550C. The analytical results will be reported as dry-weight.

All downhole equipment will be decontaminated prior to sample collection, between boreholes and following sample collection. Decontamination water and soil cuttings will be contained in United States Department of Transportation-approved steel drums, labeled and temporarily stored on-Site. The drums will be transported off-Site for disposal pending acceptance by an appropriate disposal facility.

5.3 TASK 3.0: SOIL EXCAVATION

The Site has been divided into two areas, east end and western portion, where soil containing PCBs is present above the USEPA RSL of 0.74 mg/kg (Figure 5-2). Approximately 170 cubic yards of soil containing PCBs above 1,000 mg/kg will be excavated from the east end of the Site. The east end of the Site is near previous sample locations W-1 to W-4. Soil will be removed to approximately 2-feet below ground surface and direct loaded for off-Site disposal at a Toxic Substance Control Act (TSCA)-approved disposal facility.

Approximately 200 cubic yards of soil containing PCBs less than 10 mg/kg, but above 0.740 mg/kg will be excavated from the remainder (western portion) of the Site. Soil will be removed to a depth of approximately 1-foot below ground surface. Approximately 80 cubic yards of the 200 cubic yards excavated from the western portion of the Site will be used as backfill for the east end excavation. Approximately 120 cubic yards of the 200 cubic yards excavated from the western portion of the Site will be disposed off-Site at a Class II non-hazardous waste disposal facility. Details of the excavation are presented below.

5.3.1 Worker Health and Safety

Due to the potential exposure to PCBs in soil, a HASP will be prepared and followed by on-Site personnel. The HASP will be prepared to address the requirements of the Occupational Health and Safety Administration (OSHA) 29 CFR 1910.120 guidelines and Title 8 CCR Section 5192. The HASP will be read by Site workers and visitors to apprise them of the Site conditions and

provide instructions for implementing proper safety training and procedures during development activities.

As phases of work proceed, the HASP will be updated to reflect: Site organizational structure; names of key personnel; personnel training requirements; medical surveillance program; summary of risk assessment; a task-specific hazard analysis; Site control program; personal protective equipment use; air monitoring plan; decontamination procedures; emergency response plan; spill containment; Site sanitation facilities; and standard operating procedures. The contractor conducting the development activities should also use their Injury and Illness Prevention Program (IIPP) in conjunction with the HASP.

5.3.2 Contractor Qualifications

Pursuant to Business & Profession Code, contractors performing excavation of the contaminated soil should be required to have a Class A license with a Hazardous Substances Removal Certification. In addition, the contractor's work force should be required to have 40-hours of OSHA Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training and use appropriate personal protection equipment (PPE) to control exposure to contaminants of concern (COCs). As appropriate, the contractor's personnel should also have current eight-hours of supervisory training prior to work at the Site.

5.3.3 Site Control

Access to the Site will be controlled by the contractor to prevent unauthorized entry. Fencing and other barricades should be maintained by the contractor, and the construction entrance will be closed and locked during non-working hours to prevent entrance to the Site by unauthorized personnel.

5.3.4 Excavation Procedures

To the extent practicable, the excavations will be advanced to remove soil from the areas depicted on Figure 5-2.

5.3.4.1 SOIL HANDLING

Excavated soil will be direct loaded for off-Site disposal and/or consolidated on-Site. The soil will be handled in a manner to minimize the potential for airborne dust to be generated. During soil handling, air monitoring will be conducted and used to confirm the efficacy of soil management procedures. As appropriate, procedures should be modified to control emissions of dust. Disturbed areas that are inactive for seven days or more will also be wetted to minimize potential airborne entrainment and generation of dust. In addition, trucks transporting soil off-Site will not be loaded above the side or rear of the truck bed. The truckload will be covered with a tarp prior to leaving the Site to prevent particulate emissions to the atmosphere.

5.3.4.2 AIR MONITORING

Visual and real-time air monitoring for respirable dust will be performed during excavation and soil handling activities. The objective of the air-monitoring program is to document condition, and as appropriate, adjust work activities to protect the health and safety of the on-Site construction workers and nearby community. The real-time dust monitoring should be conducted at upwind and downwind locations. The upwind and downwind monitoring locations should be adjusted, a necessary, depending on the direction of the prevailing winds.

Real-time respirable dust air monitoring will be performed using a Monitoring Instruments for the Environment, Inc. (MIE) data logging real time monitor, model PDR-1000 respirable air monitor (RAM), or equivalent. The PDR 1000 is designed to measure the concentration of airborne particulate matter using a high sensitivity nephelometer (photometer) using a light

scatter sensor. Sensitivity of the PDR 1000 is reported to range from 0.001 milligrams per cubic meter (mg/m^3) to 400 mg/m^3. The RAM should be calibrated daily.

5.3.4.3 DUST CONTROL

Dust control will be performed by applying water with a low-pressure spray system. Low volumes of potable water will be routinely spread in areas where dust may be generated because of excavation activities. If monitoring indicates that the dust control measures are not adequate, then additional engineering control measures will be implemented. These additional measures should include, but are not limited to: 1) change of work procedures; 2) soil wetting during and excavation, stockpiling, backfilling and loading; 3) tarping of trucks; and 4) covering of exposed excavations and stockpiles with plastic sheeting; and 5) use of dust palliatives.

5.4 TASK 4.0: POST-EXCAVATION SAMPLING

Prior to backfilling and capping, post-excavation soil samples will be collected from the base of the east end and western portion excavations. Post-excavation soil samples will also be collected from the sidewalls of the east end excavation. A summary of the soil sampling collection methodology is presented below.

5.4.1 Sampling Grid

Prior to sample collection, an alpha-numeric sampling grid will be laid out on the Site (Figure 5-4). The grid will be comprised of approximately 20-foot by 20-foot grid cells. Soil samples will then be collected from the center of the grid cell for laboratory analysis. Sidewall samples will be collected from the midpoint of the excavation wall at approximately 20-foot intervals along the excavation perimeter.

5.4.2 Sample Collection

The soil samples will be collected using a handheld drive sampler equipped with a 6-inch long 1.5-inch diameter stainless steel core barrel outfitted with stainless steel liners. The stainless steel liners will then be retrieved from the core barrel, capped with Teflon sheets and plastic end caps, labeled and placed in a cooler for transportation to a California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory following ASTM D 4840 chain-of-custody protocols. The soil samples will then be analyzed using United States Environmental Protection Agency (USEPA) Method 8082/3550C. The analytical results will be reported as dry-weight.

The vertical limit of the western portion excavation will be determined based on the 95-percent upper confidence level of the mean concentration for PCBs. If the 95-percent UCL concentration exceeds the USEPA RSL of 0.74 mg/kg, then additional soil will be removed from the grid cells exhibiting the highest concentration and re-sampled.

5.5 TASK 5.0: CAP AND COVER

The east end excavation will be capped by: (1) backfilling with soil removed from the western portion of the Site to 1-foot below ground surface; (2) then placement of approximately 8-inches of aggregate base rock; (3) and 6-inches of the steel reinforced Portland Type II cement concrete to the existing ground surface. The western portion excavation will be backfilled with an aggregate base rock cover to the existing ground surface. Details of the cap and cover are presented below depicted on Figure 5-5.

5.5.1 Cap-East End

5.5.1.1 GEOTEXTILE

Prior to backfilling, a non-biodegradable woven geotextile fabric will be placed within the excavation as support matting for the cap. The geotextile will be lapped over the edges of the excavation.

5.5.1.2 BACKFILLING

Approximately 80 cubic yards of soil removed from the western portion of the excavation will be placed within the east end excavation between the excavation base and approximately 1-foot below ground surface. The soil backfill will be placed in approximately 6-inch lifts and compacted to approximately 85 percent maximum dry density per ASTM D 1557. Following placement of soil backfill, the geotextile fabric will be lapped over the top of the compacted soil.

5.5.1.3 AGGREGATE BASE ROCK

An approximately 8-inch layer of Class II aggregate base rock will be placed above the geotextile and compacted soil. The aggregate base rock will be placed in lifts and compacted with a smooth roller.

5.5.1.4 CONCRETE CAP

Following placement of the aggregate base rock, an approximately 6-inch thick cap comprised of steel reinforced Portland Type II cement concrete will be installed to match the existing ground surface. The Portland Type II cement concrete will have a minimum compressive strength of 3,500 pounds per square-inch.

5.5.2 Cover-Western Portion

5.5.2.1 GEOTEXTILE

Prior to backfilling, a non-biodegradable woven geotextile fabric will be placed within the excavation as support matting for the cap. The geotextile will be lapped over the edges of the excavation.

5.5.2.2 AGGREGATE BASE ROCK

Following placement of the geotextile fabric, the excavation will be backfilled to the existing ground surface using Class II aggregate base rock. The base rock will be placed in approximately 6-inch lifts and compacted using a smooth roller.

5.6 TASK 6.0: EQUIPMENT DECONTAMINATION

Pursuant to 40CFR761.79(c)(2),(e),(f) and (g), equipment used for excavation will be decontaminated by a double wash/rinse method pursuant to the procedures defined in 40CFR761.360, Subpart S, prior to leaving the Site.

5.6.1 Decontamination Area and Worker Safety

Consistent with 40CFR761.79(e), a designated decontamination area will be established which will include plastic sheeting placed on the ground surface. The plastic sheeting will be outfitted with a berm to contain decontamination fluids. Equipment will then be staged within the bermed area. Personnel conducting the equipment decontamination will follow the procedures and protocols detailed in the contractor HASP.

5.6.2 Decontamination Procedures

Pursuant to 40CFR761.363, the equipment decontamination procedures will include two washing and two rinsing steps. Details of the decontamination procedures are presented below.

5.6.2.1 FIRST WASH/RINSE

Pursuant to 40CFR761.375(a)(b), initially, the exterior surfaces of the equipment will be wet washed with an industrial strength detergent or non-ionic surfactant solution for a minimum of one minute using disposable scrubbers and absorbent pads to remove soil and dust adhered to the equipment. Following the initial washing, the equipment surfaces will then be wiped using disposable absorbent pads remove residual cleaner solution until the equipment surface appears dry. Following the initial wash, the equipment surfaces will be rinsed with water using a low-pressure sprayer. Following the initial rinse, the equipment surfaces will then be wiped with disposable absorbent pads until the surface appears dry.

5.6.2.2 SECOND WASH/RINSE

Pursuant to 40CFR761.375(c)(d), the second wash will be conducted by applying an organic solvent using scrub brushes and/or disposal scrubbing pads to the equipment surfaces and let stand for a minimum of one minute. The organic solvent will then be wiped from the equipment surfaces using disposable absorbent pads until no visible traces of solvent remain.

The equipment surfaces will then wetted with a clean rinsed solvent and allowed to stand for a minimum of one minute. The clean rinse solvent will then be wiped from the equipment surfaces using a clean disposable absorbent pad until no liquid is visibly present on the surface.

In addition, rip-rap will be placed at the Site entrance to minimize track-out of materials from the Site following decontamination procedures.

5.6.3 Documentation and Recordkeeping

Pursuant to 40CFR761.79(f), field notes and photographs of the decontamination procedures will be taken to document that equipment used during the soil excavation has been decontaminated. The decontamination records will be maintained for three years following completion of the decontamination procedures.

5.6.4 Decontamination Fluids

Pursuant to 40CFR761.79(g), the decontamination fluids will be contained and placed in a 55-gallon United states Department of Transportation (USDOT)-approved containers for temporary storage on the Site. The decontamination fluids will then be sampled and characterized for off-Site disposal pending acceptance by an appropriate disposal facility.

5.7 TASK 7.0: LAND USE COVENANTS

A *Land Use Covenant* (*LUC*) will be prepared and recorded after physical remedial measures are implemented and before the Site is certified by USEPA as being remediated. The *LUC* will be recorded to identify specific land use restrictions associated with the Site. The *LUC* will preclude owners or occupants of the property from drilling, boring or excavating at the Site without an *Operations and Maintenance Plan* (O&M Plan) submitted to the USEPA for review and approval.

5.8 TASK 8.0: CAP MONITORING

An *O&M Plan* will be prepared to outline procedures for maintaining the integrity and effectiveness of the cap and security fencing. The *O&M Plan* will include: a summary of the Site conditions: cap construction details; operations and maintenance procedures for cap maintenance; and emergency response and notification protocols.

5.9 TASK 9.0: CONTINGENCY PLAN

If areas of higher PCB concentrations or potential unknown conditions are discovered during capping, then work will stop and a notification provided to the USEPA describing the Site conditions. The area will be cordoned off to minimize access. Soil samples will then be collected to characterize the conditions. If, based on the analytical results of the soil samples and discussions with the USEPA, additional measures other than capping are necessary, then a supplemental cleanup plan will be prepared and submitted to the USEPA for review and approval.

5.10 TASK 10.0: COMPLETION REPORT

Subsequent to the capping activities, a *Completion Report* summarizing the findings of the analytical testing and other pertinent data will be prepared for review and approval. The report will include:

- Introduction and executive summary, summary of the capping activities and any changes to the cap design or field activities;
- Field data sheets (i.e., notes, charts, sketches, or photographs), field air monitoring results and a record of field and/or laboratory tests; and
- Summary of deviations from the approved *Cleanup Plan*.

Appendices to the report will include field air monitoring data forms and analytical laboratory data sheets containing quality assurance/quality control (QA/QC) data implemented during the work. The *Completion Report* will be prepared under the supervision of a California Professional Civil Engineer and Geologist, with appropriate qualifications.

6.0 SCHEDULE

The following is a schedule for implementing the tasks outlined in Section 5.0 of this *Cleanup Plan:*

- Capping: within 30 days following approval of the *Cleanup Plan*; and
- Land use covenants: recorded within 60 days following completion of capping.

7.0 REFERENCES

AMEC, *Sampling and Analysis Plan, Tyco Thermal Controls, LLC, 2201 Bay Road, Redwood City, California*, (AMEC, 2011).

USEPA, *Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by The Environmental Protection Agency PCB Spill Cleanup Policy*, June 23, 1987, Revised and Clarified April 18, 1991.

USEPA, *Supplemental Guidance to RAGS: Calculating the Concentration Term, Publication 9285.7-081, Intermittent Bulletin, Volume 1, Number 1*, May 1992 (USEPA, 1992).

USEPA, *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, OSWER 9355.4-24*, December 2002 (USEPA, 2002).

USEPA, *Regional Screening Levels*, November 2012 (USEPA, 2012).

USEPA, *Letter to 899 Broadway Associates, Polychlorinated Biphenyls (PCBs), Toxic Substances Control Act (TSCA)-USEPA Directive for Cleanup of PCBs at Railroad Spur Property Adjacent to former Tyco thermal Controls LLC, 2201 Bay Road, Redwood City, California (Former Tyco Property)*, May 31, 2013 (USEPA, 2013).

8.0 DISTRIBUTION LIST

Ms. Carmen Santos (Electronic and Hard Copy)
RCRA Corrective Action Office
Waste Management Division
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

Mr. David Barr (Electronic and Hard Copy)
California Regional Water Quality Control Board
-San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Roland Lampert (Electronic Copy)
899 Broadway Associates
900 Veterans Boulevard, Suite 410
Redwood City, CA 94063

Geotracker (Electronic Copy)

TABLE 3-1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
Railroad Spur Property - Bay Road
Redwood City, California

Composite Sample ID	Date	Depth (ft)	PCBs		
			Aroclor 1254	Aroclor 1260	Total
			(mg/kg)	(mg/kg)	(mg/kg)
W-1,-2	12/21/10	0.3	2,170	1,350	3,520
		1	1,860	922	2,782
W-3,-4	12/21/10	0.3	0.857	2.18	3.037
		1	1,440	77.2	1,517
W-5,-6	12/21/10	0.3	<0.500	0.574	0.574
		1	0.568	0.483	1.051
W-7,-8	12/21/10	0.3	0.99	1.08	2.07
		1	3.38	1.91	5.29
W-9,-10	12/21/10	0.3	2.89	3.56	6.45
		1	1.75	1.57	3.32
W-11,-12	12/21/10	0.3	0.329	0.412	0.741
		1	<0.100	<0.100	--
W-13,-14	12/21/10	0.3	1.91	2.59	4.50
		1	0.154	0.118	0.272
W-15,-16	12/21/10	0.3	0.713	0.546	1.259
		1	<0.100	0.120	0.120
W-17,-18	12/21/10	0.3	0.164	0.484	0.648
		1	0.365	0.459	0.824
W-19,-20	12/21/10	0.3	0.360	0.504	0.864
		1	<0.100	<0.100	--

TABLE 3-2
SUMMARY OF WIPE AND BULK SAMPLE ANALYTICAL RESULTS
Railroad Spur Property - Bay Road
Redwood City, California

Location	Sample ID	Sample Type	Sample Description	PCBs
Wipe Samples				(ug/wipe-100cm^2)
R&B Company	WP-1	Wipe	Metal Shelving	<1.00
	WP-2	Wipe	Metal Shelving	<1.00
	WP-5	Wipe	Forklift	<1.00
	WP-6	Wipe	Forklift	<1.00
	WP-7	Wipe	Forklift Wash Area	<1.00
	WP-8	Wipe	Pipes	<1.00
	WP-9	Wipe	Pipes	<1.00
1155 Broadway	WP-3	Wipe	Window	<1.00
Smart & Final	WP-4	Wipe	Metal sign	<1.00
40 CFR 761 (ug/wipe-100cm^2)				10
Bulk Samples				(ug/kg)
R&B Company	BK-2	Bulk	Sand Fill	579
	BK-3	Bulk	Wood Shipping Frame	<160
	BK-4	Bulk	Metal Shipping Frame	<100
	BK-5	Bulk	Wood Pallet	<160
USEPA RSL-Industrial (ug/kg)				740

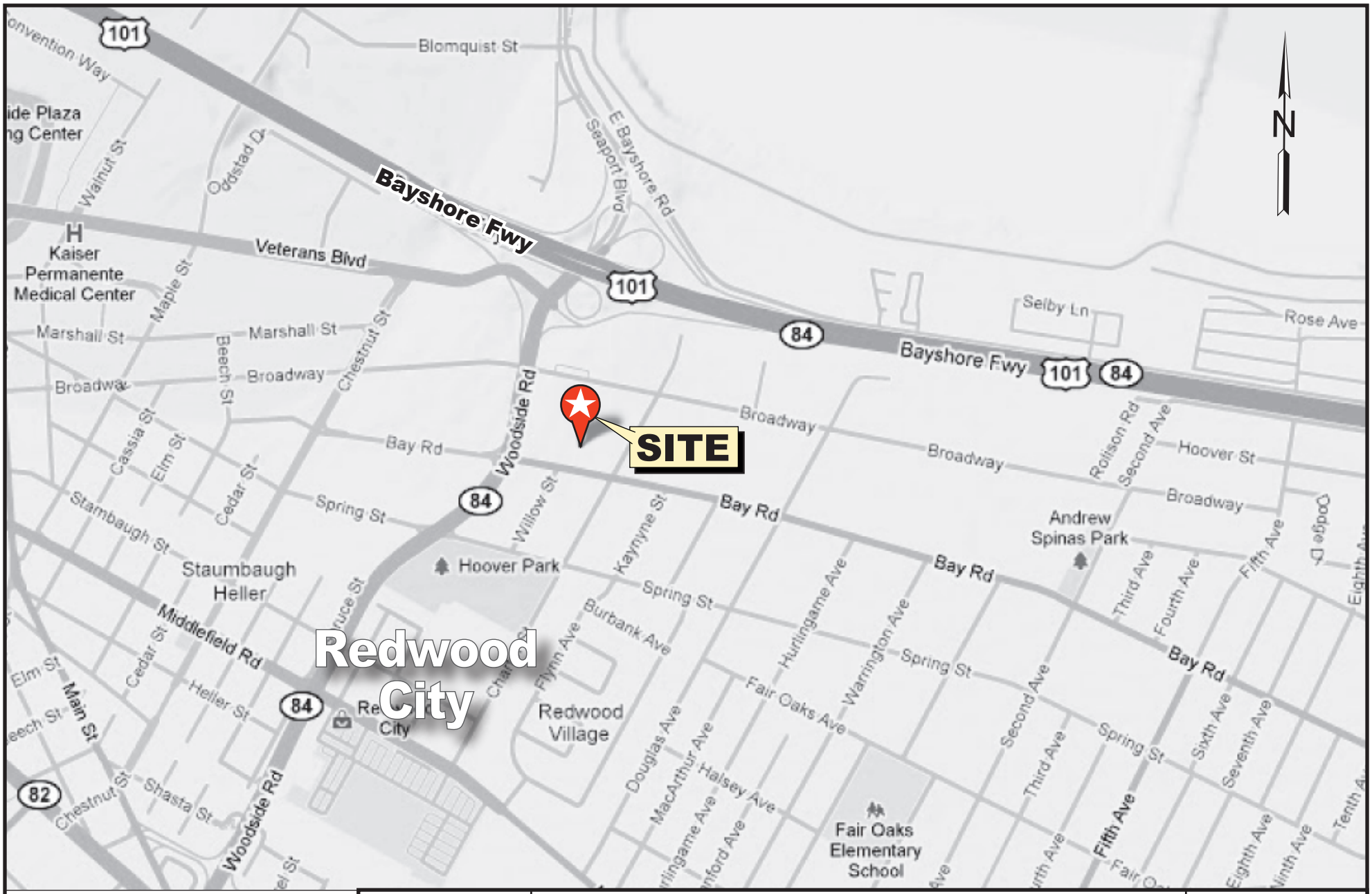
Notes:

ug/wipe-100cm^2: micrograms per wipe within 100cm2 area

ug/kg: micrograms per kilogram

40 CFR 761: 40 Code of Federal Regulations PCB Cleanup Level

RSL: USEPA Regionl Screening Level (November 2012).



0 FEET 1000

Figure 1-1

May 2014

SITE LOCATION MAP

Bay Road Railroad Property, Redwood City, California

WEST Environmental Services & Technology

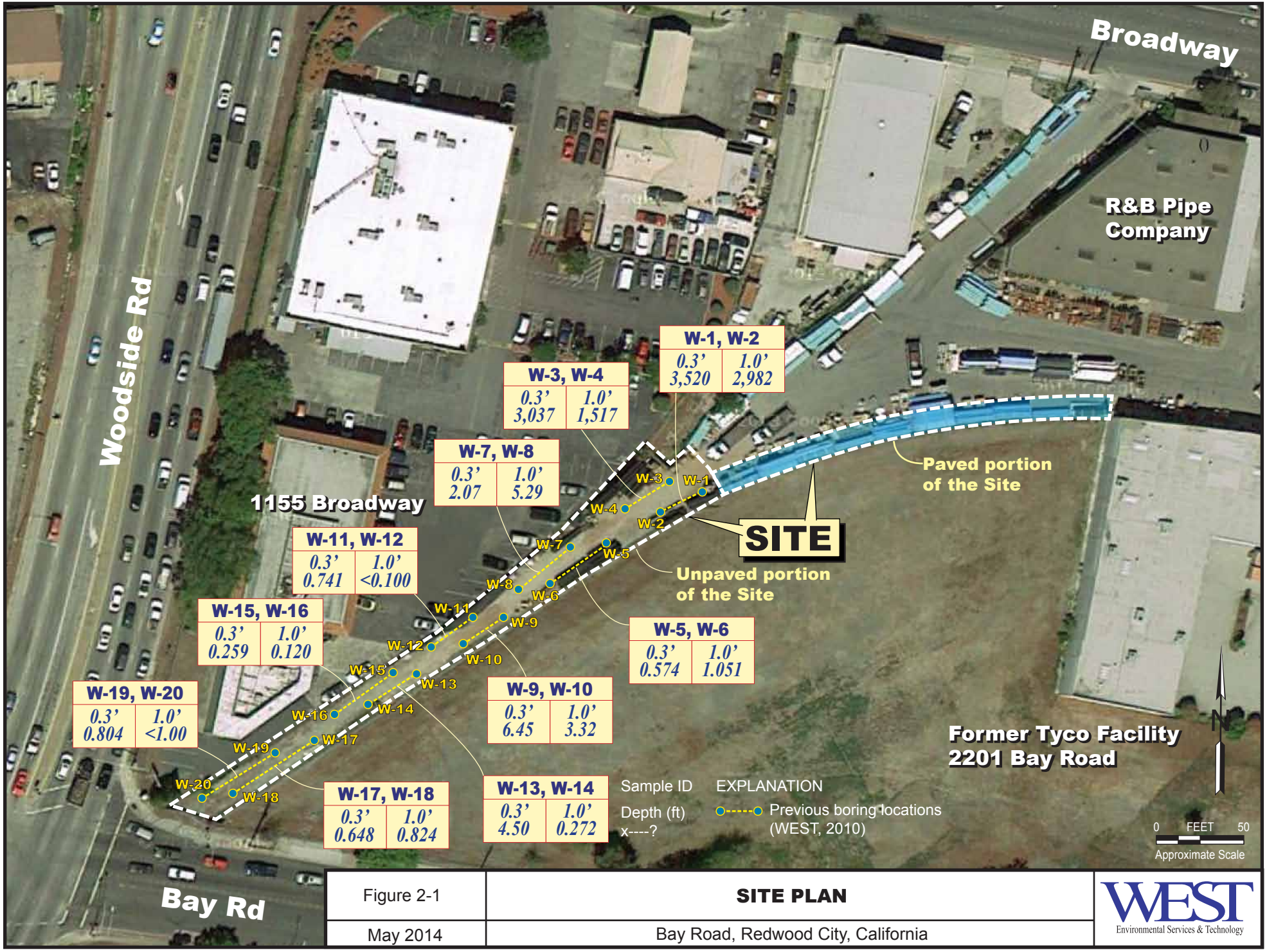


Figure 2-1	SITE PLAN	WEST Environmental Services & Technology
May 2014	Bay Road, Redwood City, California	

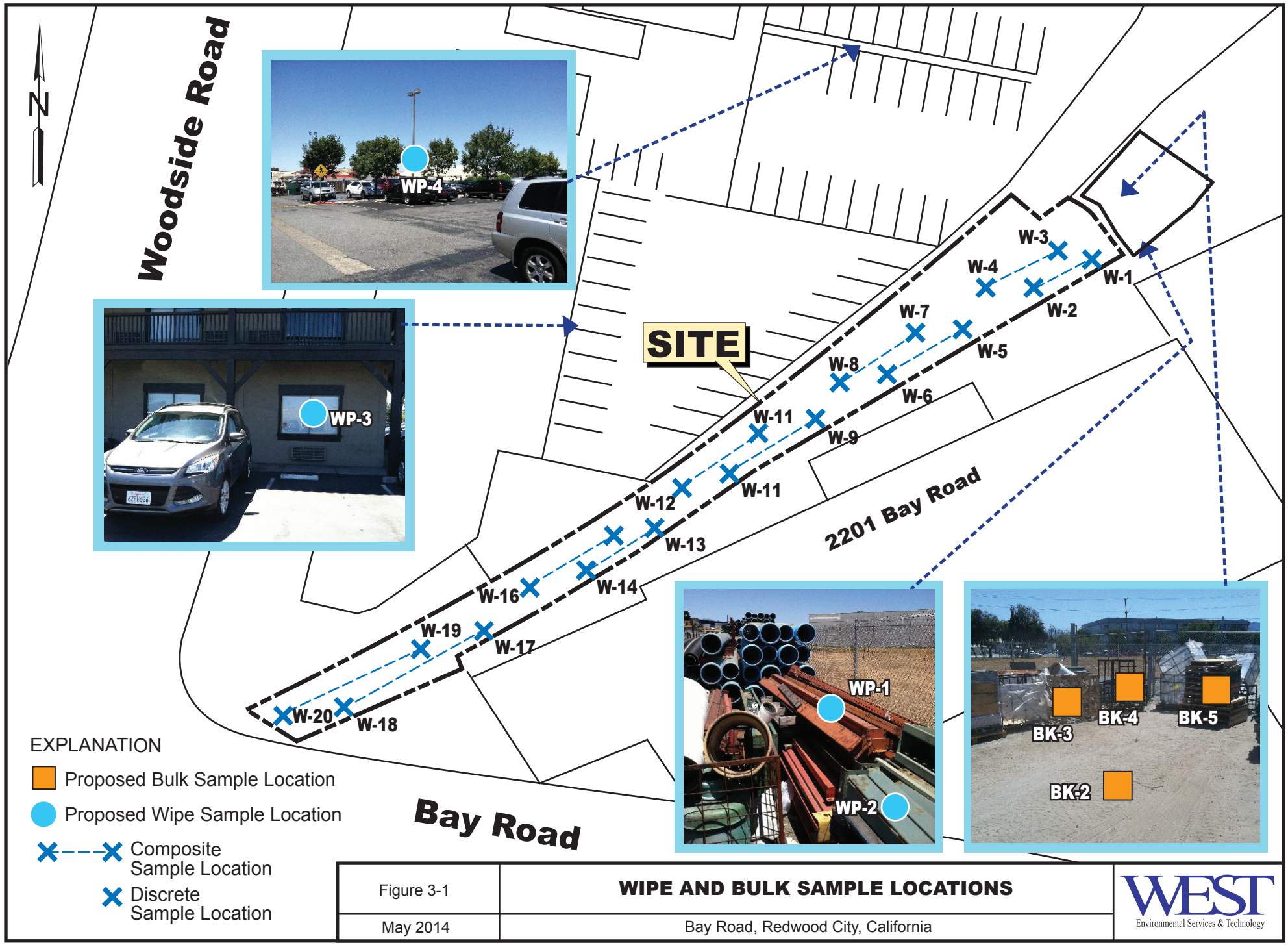


Figure 3-1	**WIPE AND BULK SAMPLE LOCATIONS**	WEST Environmental Services & Technology
May 2014	Bay Road, Redwood City, California	

Figure 5-1	**PRE-EXCAVATION SAMPLING PLAN**	WEST Environmental Services & Technology
May 2014	Bay Road, Redwood City, California	

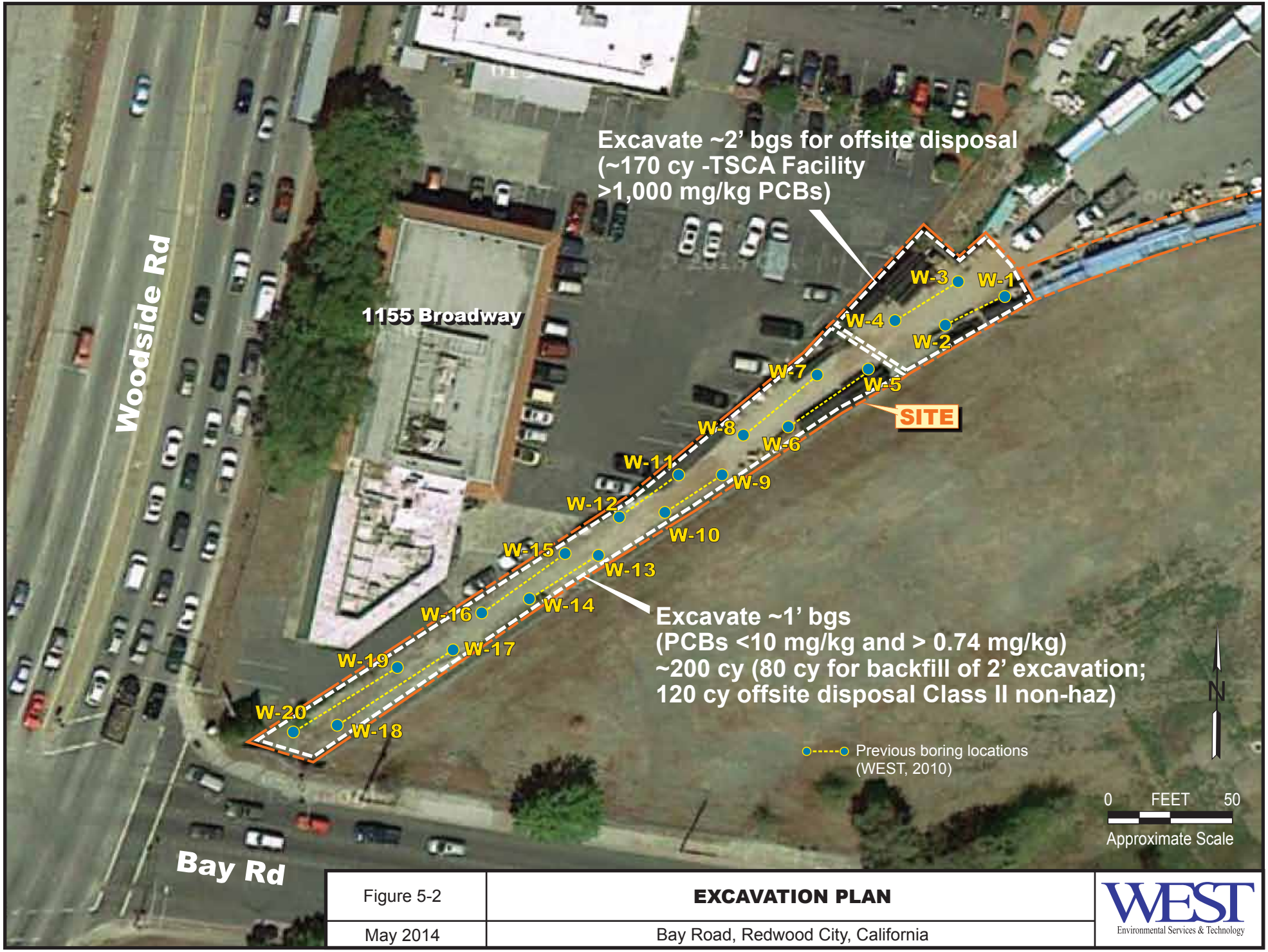


Figure 5-2	**EXCAVATION PLAN**	WEST Environmental Services & Technology
May 2014	Bay Road, Redwood City, California	

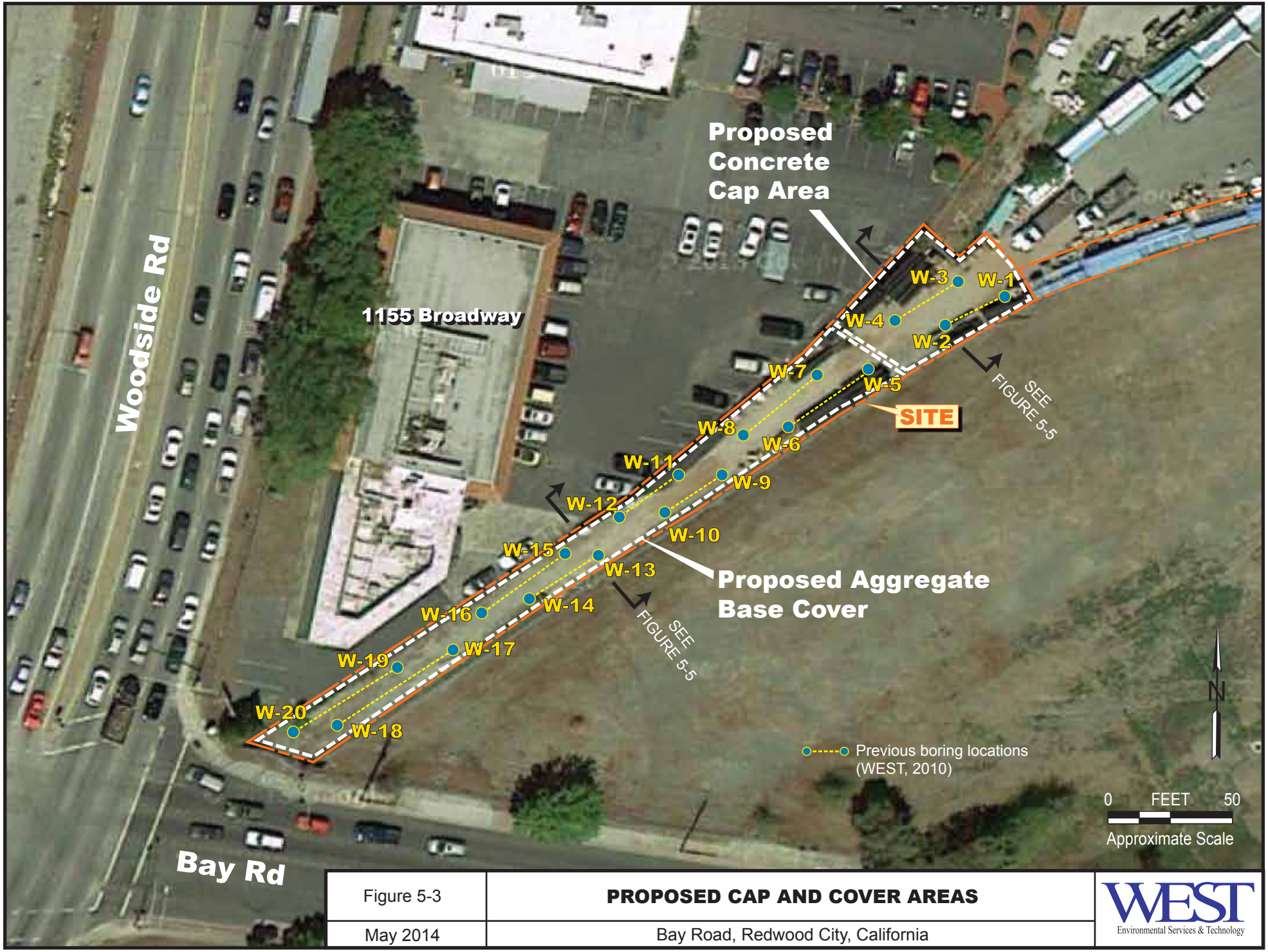
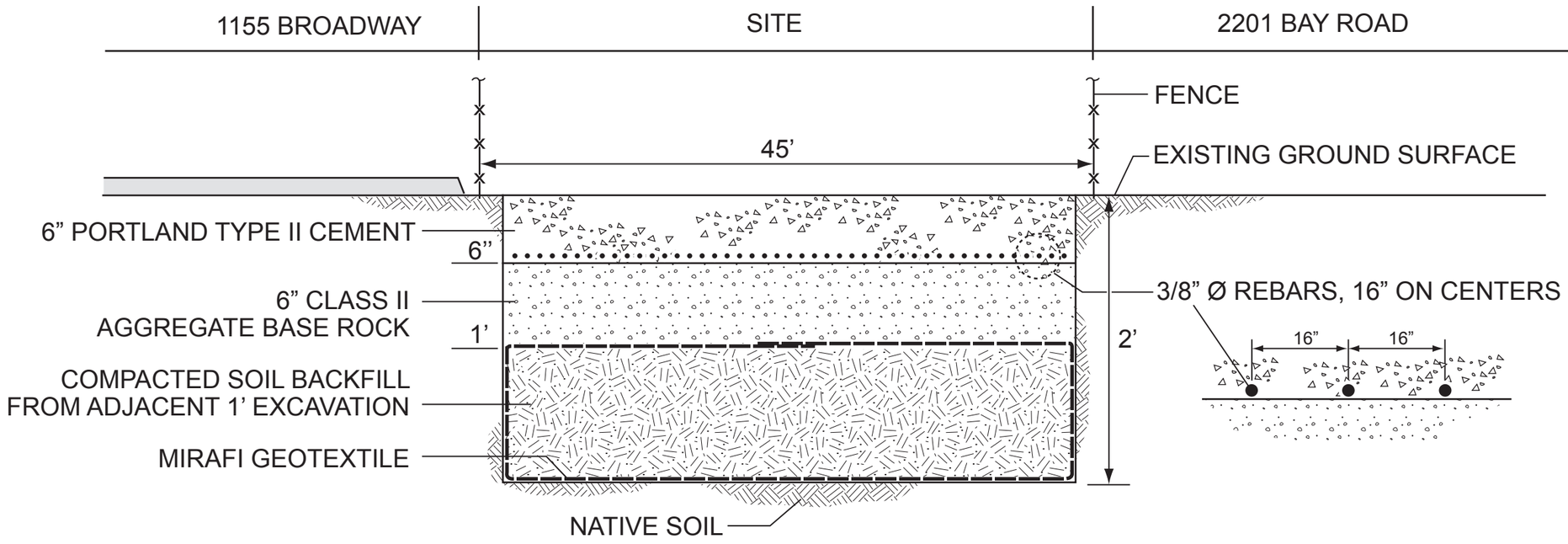


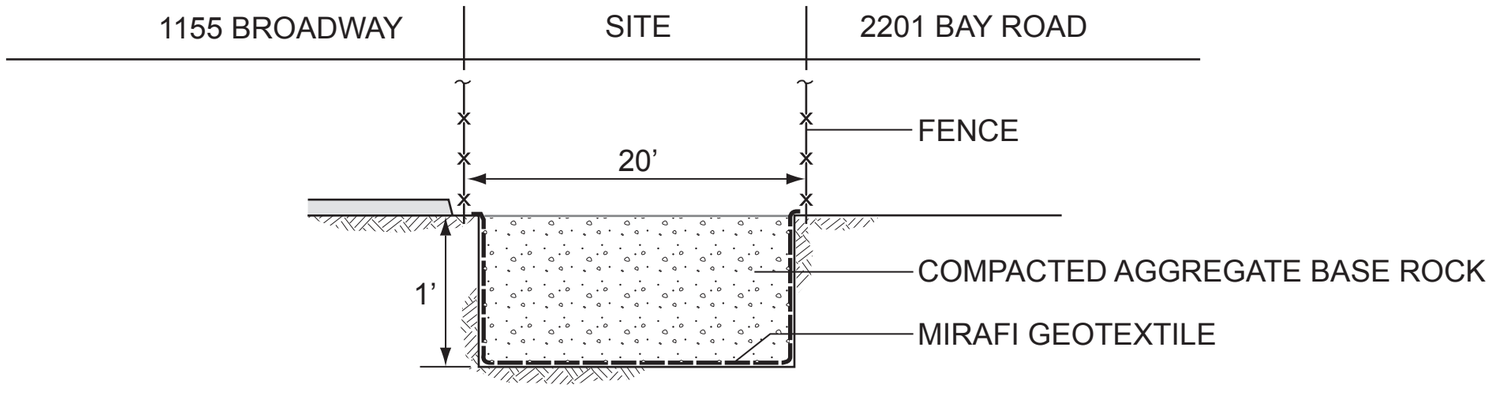
Figure 5-3	**PROPOSED CAP AND COVER AREAS**	WEST Environmental Services & Technology
May 2014	Bay Road, Redwood City, California	

Figure 5-4	**POST-EXCAVATION SAMPLING PLAN**	WEST Environmental Services & Technology
May 2014	Bay Road, Redwood City, California	



CAP DETAIL

N.T.S.



COVER DETAIL

N.T.S.

CAP AND COVER DETAILS

Former Rail Spur Properties
Redwood City, California

WEST Environmental Services & Technology

Figure 5-5

May 2014